



21-50-06-20
NSN 5985-01-351-3710
UHF / L-Band
Airborne Blade Antenna
225 to 512 & 950 to 1220 MHz

FEATURES

- **Covers standard UHF Com, TACAN, IFF Bands**
- **High Isolation provided by external diplexer**
- **High Strength Composite Blade with Aluminum Alloy Base Block**
- **Low Side Area, Low Drag**
- **Leading Edge Protection for Rough Field Operation**
- **Meets Lightning Strike Criteria of AS-3191**
- **Environmental Performance to MIL-STD-810, MIL-E-5400**



The 21-50-06-20 is a high performance combined UHF/L-band airborne blade antenna suitable for aircraft operating in excess of Mach 2. It is also ideal for use on aircraft subjected to rough-runway operation where both a protective leading edge strip and the solid aluminum alloy base block protect against debris impact.

Construction is from a one piece fiberglass blade molding intimately bonded into an aluminum alloy base block which houses the matching circuits and provides for very solid attachment to airframe via 8 fixing holes.

Radiating elements are surface deposited silvery epoxy shaped in such a way as to produce minimum VSWR in both UHF and L-band and also to optimize radiation pattern at L-band where the antenna would otherwise be electrically too long.

The antenna assembly is sealed by closed cell foam for reliable operation in world-wide conditions of service.

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SPECIFICATIONS

Cooper Antennas Model 21-50-06-20

Airborne Blade Antenna

ELECTRICAL

Frequency	UHF : 225 to 512 MHz L-Band : 950 to 1220 MHz
Gain	UHF : within 1.5 dB of $\lambda/4$ stub L-Band : within 1.6 dB of $\lambda/4$ stub
VSWR	UHF : 225 - 512 MHz \leq 2.5:1 L-Band : 960-1220 MHz \leq 2.0:1
Impedance (nominal)	50 Ohms
Power	UHF : 45 Watts CW L-Band : 2 Watts average 2.5 kWatts Peak
Polarization	Vertical (when mounted vertically)
Radiation	Omni directional in azimuth plane to \pm 1 dB
Antenna RF Connectors	UHF TNC Female L-Band TNC Male

MECHANICAL

Antenna Shell Type	Epoxy/fiber glass blade in aluminum alloy base collar
Height	7.73 inches (196mm)
Weight	1.63 lbs (0.74kg)
Side Loading	\geq 8 psi ultimate
Base Plate Shape	Oval shape
Fixing Holes	8 x \varnothing 0.208 inch (5.28mm) holes, counter sunk 100°.

FINISH

Antenna	Grey Urethane
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Other finish options are available. Please specify finish required when ordering.

Note: Cooper Antennas Ltd has a policy of continuous product improvement and data herein is therefore subject to change.
Please check with Cooper Antennas Ltd that this data sheet is at latest issue before initiating contract activity.